

delivering 2,300 blows a minute; the hammer was held by both hands but the left hand was exposed to greater vibration than the right. The second group of nine men used a trip-hammer, in the working of which both hands were used.

The men were examined in a warm room, and both motor and sensory functions were tested. Afterwards the resistance of the nerves to ischaemia was tested by raising the pressure in sphygmomanometer cuffs around the arm to 200 mm. of mercury and estimating the time of onset and distribution of paræsthesiæ and subjective numbness. Four men were also examined with a nerve clamp which rendered a segment of a nerve in the upper arm ischaemic.

In the authors' cases the typical history was of attacks of numbness, whiteness and coldness which began in the tips of the affected fingers and spread proximally. The attacks lasted a variable time depending mostly on how soon the hand could be warmed, and usually passed off when the patient started work. The incidence was high, attacks occurring in 29 out of the 31 men examined who were using the trip-hammer. The distribution of the attacks could be related to the type of equipment; in those men using the pneumatic hammer trouble began in the left hand. The time required for the production of symptoms varied; some had noticed symptoms after working for ten years, others for only a month. The progress of the disease was variable too; in some men it remained static, in others it got steadily worse and cessation of the use of the tool was also of variable benefit. The disablement at work was slight if the man remained at the same job, but symptoms often interfered with outdoor recreation, such as fishing or shooting. In contradistinction to what is usually believed, attacks came on not only when cold but also when the hands and body were warm; apparently the use of the vibrating tool itself was not a precipitating factor because often attacks passed off when the man started to work. Nocturnal attacks were also a noteworthy feature. Paræsthesiæ in the affected fingers were noted at the onset of attacks, but were much more common as the attack was passing off. Permanent sensory changes were striking; 26 of the 37 men had impaired touch sensation, usually closely restricted to the fingers involved in the attack; pain sensation was impaired in 22 of the cases, and eight showed impairment of passive movement in the terminal interphalangeal joint. Motor weakness was also found in the affected hand in 13 of 37 men.

In experiments with the use of the sphygmomanometer cuff other authors have shown that subjective numbness develops only after at least ten minutes' duration; in the present series this test showed evidence of nerve involvement. Rendering a segment of the ulnar nerve ischaemic by a clamp produced subjective numbness in the little finger at time intervals much less than in normal people. Though the incidence of Raynaud's phenomenon was high, it was variable; those who held the hammer in a loose grip did not seem to develop the most severe symptoms. Since both hands and arms are wholly subjected to the same vibration, and since attacks may be confined to one hand for some years, it was probably the exact mode of application of vibration to certain areas which determined the distribution of the phenomenon. This fact suggests that some slight modification of either working technique or tools might reduce this selective trauma. Permanent neurological defects may be found in traumatic Raynaud's phenomenon; the lesion probably lay in the nerve fibres and not in the sensory end-organs. Numbness of the fingers can be greater in extent than the whiteness; post-ischaemic paræsthesiæ following arrest of the circulation are very mild: these factors and the motor weakness as well suggest the existence of a neurological lesion proximal to the ischaemic digital areas. There is therefore considerable evidence to suggest that proximal lesions in the peripheral nerves are associated with and may well cause the traumatic Raynaud phenomenon.

W. F. T. TATLOW

FORTHCOMING MEETINGS

CANADA

SECTIONAL MEETINGS, AMERICAN COLLEGE OF SURGEONS, Winnipeg, Manitoba. (Dr. P. H. T. Thorlakson, Chairman.) April 25-26, 1955.

CANADIAN HOSPITAL ASSOCIATION, Biennial Meeting, Ottawa, Ont. (Executive Director: Dr. W. D. Piercey, 280 Bloor Street West, Toronto 5, Ont.) May 9-11, 1955.

BRITISH COMMONWEALTH MEDICAL CONFERENCE OF THE BRITISH MEDICAL ASSOCIATION, Toronto, Ontario. (Dr. A. D. Kelly, Canadian Medical Association, 244 St. George Street, Toronto 5.) June 14-16, 1955.

COMBINED MEETING OF THE CANADIAN PÆDIATRIC SOCIETY, SOCIÉTÉ CANADIENNE DE PÉDIATRIE, BRITISH PÆDIATRIC ASSOCIATION, AMERICAN PÆDIATRIC SOCIETY AND THE SOCIETY FOR PÆDIATRIC RESEARCH, Quebec City, Quebec. (Dr. J. C. Rathbun, Secretary-Treasurer, 526 Waterloo Street, London, Ont.) June 15-18, 1955.

BRITISH MEDICAL ASSOCIATION, CANADIAN MEDICAL ASSOCIATION, ONTARIO MEDICAL ASSOCIATION, Conjoint Meeting, Toronto, Ont. (Dr. A. D. Kelly, General Secretary, Canadian Medical Association, 244 St. George Street, Toronto 5, Ont.) June 17-24, 1955. (Scientific Sessions June 20-24.)

CANADIAN ACADEMY OF ALLERGY, Annual Meeting, Royal York Hotel, Toronto, Ont. (Dr. P. A. Ryan, Acting Secretary, 229 St. Clair Avenue West, Toronto 7, Ont.) June 21, 1955.

CANADIAN PUBLIC HEALTH ASSOCIATION AND ALBERTA PUBLIC HEALTH ASSOCIATION, Conjoint Meeting, Edmonton, Alta. (Dr. William Mosley, Honorary Secretary, 150 College Street, Toronto 5, Ont.) September 6-8, 1955.

UNITED STATES

AMERICAN ASSOCIATION OF ANATOMISTS, Philadelphia. (Dr. N. L. Hoerr, Secretary, 2109 Adelbert Road, Cleveland, Ohio.) April 6-8, 1955.

AMERICAN DERMATOLOGICAL ASSOCIATION, Belleair, Florida. April 17-21, 1955.

AMERICAN RADIUM SOCIETY, Annual Meeting, Shoreham Hotel, Washington, D.C. (Dr. R. E. Tricke, Secretary, Mayo Clinic, Rochester, Minn.) April 21-23, 1955.

INTER-AMERICAN CONGRESS OF RADIOLOGY, Shoreham Hotel, Washington, D.C. (Dr. E. P. Pendergrass, Secretary-General, 3400 Spruce Street, Philadelphia 4, Pa.) April 24-29, 1955.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Pa. (Mr. E. R. Loveland, Executive Secretary, 4200 Pine Street, Philadelphia 4, Pa.) April 25-29, 1955.

AMERICAN GOITER ASSOCIATION, 1955 MEETING, Skirvin Hotel, Oklahoma City, Oklahoma. (Dr. J. C. McClintock, Secretary.) April 28-30, 1955.

AMERICAN PSYCHOSOMATIC SOCIETY, Annual Meeting, Atlantic City, N.J. May 4-5, 1955.

AMERICAN UROLOGICAL ASSOCIATION, Biltmore Hotel, Los Angeles, California. (Dr. C. H. de T. Shivers, Secretary, 121 S. Illinois Ave., Atlantic City, N.J.) May 16-19, 1955.

EIGHTH ANNUAL INDUSTRIAL MICROBIOLOGY INSTITUTE, West Lafayette, Indiana. (Dr. C. L. Porter, Director of the Institute, Department of Biological Sciences, Purdue University, West Lafayette, Indiana.) June 5-11, 1955.

AMERICAN MEDICAL ASSOCIATION, 1955 Annual Meeting, Atlantic City, N.J. (Dr. George F. Lull, Secretary, 535 North Dearborn Street, Chicago 10, Ill.) June 6-10, 1955.

ANNUAL ASSEMBLY IN OTOLARYNGOLOGY, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois. (Dr. F. L. Lederer, Professor and Head of the Department.) September 19-October 1, 1955.

ANNUAL MEETING OF THE AMERICAN ACADEMY FOR CEREBRAL PALSY, Memphis, Tennessee. (Dr. R. A. Knight, Secretary-Treasurer, 869 Madison Avenue, Memphis 3, Tenn.) October 10-12, 1955.

OTHER COUNTRIES

TENTH CONGRESS OF THE INTERNATIONAL UROLOGICAL SOCIETY, Athens. (Prof. Z. Kairis, rue Voukourestiou 25, Athens.) April 10-18, 1955.

MIDDLE EAST MEDICAL ASSEMBLY OF THE AMERICAN UNIVERSITY OF BEIRUT, American University campus, Beirut, Lebanon. (Dr. John L. Wilson, Professor of Surgery, Chairman, Committee for the Fifth Middle East Medical Assembly.) April 22-24, 1955.

WORLD HEALTH ORGANIZATION—8th General Assembly, Mexico City. (World Health Organization, Palais des Nations, Geneva, Switzerland.) May 10, 1955.

FIFTEENTH CONGRESS OF FRENCH-SPEAKING PÆDIATRICIANS, Marseilles, France. (Dr. René Bernard, Clinique Médicale Infantile, Hôpital de la Conception, Marseilles.) May 23-25, 1955.

INTERNATIONAL COLLEGE OF SURGEONS—20th Anniversary Meeting, Geneva, Switzerland. (Dr. Max Thorek, 850 West Irving Park Road, Chicago 13, Ill.) May 23-26, 1955.

SEVENTH INTERNATIONAL CONGRESS OF COMPARATIVE PATHOLOGY, Lausanne, Switzerland. (Prof. Hauduroy, 19 avenue César-Roux, Lausanne.) May 26-31, 1955.

INTERNATIONAL HOSPITAL CONGRESS, Lucerne, Switzerland. (Capt. J. E. Stone, Hon. Secretary, International Hospital Federation, 10 Old Jewry, London, E.C.2, England.) May 29-June 3, 1955.

EUROPEAN CONGRESS ON RHEUMATISM, Scheveningen, The Hague, Netherlands. (Dr. H. van Swaay, Secretary, Pieter Bothstraat 12, The Hague, Netherlands.) June 13-17, 1955.

FIFTH CONGRESS OF THE INTERNATIONAL ASSOCIATION FOR THE STUDY OF THE BRONCHI, Stockholm, Sweden. (Dr. J. M. Lemoine, 187 boulevard Saint-Germain, Paris 7e.) June 18-19, 1955.

FOURTH COMMONWEALTH HEALTH AND TUBERCULOSIS CONFERENCE, Royal Festival Hall, London, England. (Secretary-General, National Association for the Prevention of Tuberculosis, Tavistock House North, Tavistock Square, London, W.C.1, England.) June 21-25, 1955.

SECOND CONGRESS OF THE INTERNATIONAL DIABETES FEDERATION, Cambridge, England. (Organizing Secretary, Mr. J. G. L. Jackson, Congress Office, 152 Harley Street, London, W. 1, England.) July 4-8, 1955.

CONGRESS OF INTERNATIONAL ASSOCIATION OF APPLIED PSYCHOLOGY, London, England. (Dr. C. B. Frisby, President, National Institute of Industrial Psychology, 14 Welbeck Street, London, England.) July 18-23, 1955.

SIXTEENTH CONGRESS OF THE INTERNATIONAL SOCIETY OF SURGERY, Copenhagen, Denmark. (Dr. Hasner, 7 Blegdamsvej, Copenhagen.) July 24-31, 1955.

SIXTH INTERNATIONAL ANATOMICAL CONGRESS, Paris, France. (Prof. Gaston Cordier, Secretary-General, 45 rue des Saints-Pères, Paris 6e, France.) July 25-30, 1955.

THIRD INTERNATIONAL CONGRESS OF BIOCHEMISTRY, Brussels, Belgium. (Prof. C. Liébecq, Secretary-General, 17 Place Delcour, Liège, Belgium.) August 1-6, 1955.

NEWS ITEMS

BRITISH COLUMBIA

The Vancouver Medical Association held its 33rd Osler Lecture session on March 1 at the Hotel Vancouver. This is perhaps the most important meeting of the year, and is marked by two events yearly.

The first of these is the Osler Lecture by a speaker chosen by the Executive. This year's choice was Dr. Donald H. Williams, the well-known Vancouver dermatologist. Dr. Williams's subject was "The Maimonidean Code" and in a brilliant address he dealt with the problems facing medicine since the birth of Osler in 1849, and the ways in which these have been solved. He pointed to the terrific challenge of world trends to the profession of medicine, and our responsibility in these world affairs; the admittedly perilous state of things can only be faced on moral and ethical grounds, and with the weapons of high moral and ethical standards, individually and collectively. These standards were laid down for us eight hundred years ago by Maimonides, the great Hebrew physician, sage and poet of the twelfth century.

The other event was the granting of the P.G.F. degree (Prince of Good Fellows)—the highest honour that this Association has to bestow. Its recipient must, in the Latin words of the Testamur, have proved himself a man of the highest integrity, devotion to his profession, and service to the Association as well as to his city and country.

Those honoured this year were Dr. Wallace J. Dorance and Dr. R. P. Kinsman, both graduates of McGill (1921), one a surgeon and the other a paediatrician. The acclaim of the audience showed its appreciation of the choice made.

The Pearson Hospital of the Tuberculosis Division of the Public Health Department of the Province of B.C. is to be enlarged by a 209-bed addition to its buildings at West 57th Avenue, Vancouver. This will be a five-storey building.

Five Vancouver medical men attended the meetings of the Canadian Arthritis and Rheumatism Society last month in Toronto: Dr. R. W. Lamont-Havers, medical director of the B.C. Division of the Society; Dr. Harold Robinson, research director; Dr. J. A. Traynor, chairman of the medical advisory committee; Dr. Marvin Darrache, C.A.R.S. research worker at University of British Columbia; and Dr. A. W. Bagnall, a member of the C.A.R.S. national committee on programme and standards.

Dr. Cameron S. Allen, Vancouver orthopaedist, has been awarded an exchange fellowship by the British, American and Canadian Orthopaedic Associations, and will travel to England shortly. He will be the only Canadian, with four American orthopaedists also travelling as fellows. This team will visit England and Paris to confer with leading orthopaedists in these centres, see the latest methods and explore results.

The question of hospital bed shortage is again very much to the fore. The question came up at the meeting of the Legislature in Victoria, and the Hon. Eric Martin, Minister of Health, dealt extensively with the subject. It was pointed out that in spite of the increase in sales tax from 3 to 5%, which was designed to take care of hospital costs, there is still a deficit. It is believed that there will be an earnest attempt made by the government, assisted by representatives of the medical profession and the hospitals, to solve this very pressing problem.

Books Received

Books are acknowledged as received, but in some cases reviews will also be made in later issues.

Experimental Diabetes: And its Relation to the Clinical Disease. A Symposium organized by The Council for International Organizations of Medical Sciences established under the Joint Auspices of UNESCO and WHO. 352 pp. Illust. \$9.00. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

Arrest of Bleeding. Physiology: Pharmacology: Pathology. J. Roskam, Professor of Internal Medicine, University of Liege, Belgium. 71 pp. Illust. \$3.80. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

Physical Aspects of Betatron Therapy. J. S. Laughlan, Associate Professor of Biophysics, Cornell University Medical College, Sloan-Kettering Division, and Department of Physics, Memorial Center for Cancer and Allied Diseases, New York City. 98 pp. Illust. \$4.25. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

Les Cahiers de l'Hotel-Dieu de Quebec. Hotel-Dieu de Quebec Reports. Eighth Year, 1953. 373 pp. Illust.

The Bacterial Factor in Traumatic Shock. J. Fine, Department of Surgery, Beth Israel Hospital, Harvard Medical School, Boston, Massachusetts. 82 pp. \$3.00. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

The Hidden Causes of Disease. De Abditis Nonnullis ac Mirandis Morborum et Sanationum Causis. Antonio Benivieni of Florence; translated by C. Singer. 217 pp. Illust. \$7.50. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

Laboratory Aids in Endocrine Diagnosis. R. F. Escamilla, Associate Clinical Professor of Medicine, University of California Medical School, San Francisco. 141 pp. Illust. \$5.25. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

The Diagnosis and Treatment of the Infertile Female. F. A. Simmons, Assistant Surgeon, Massachusetts General Hospital, Assistant Surgeon, Free Hospital for Women, Brookline, Massachusetts. 83 pp. Illust. \$2.75. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.

Muscular Contraction. M. Dubuisson, Director, Laboratory of General Biology, University of Liege, Belgium. 243 pp. \$7.25. Charles C Thomas, Springfield, Illinois; The Ryerson Press, Toronto, 1954.



ONTARIO

OPPORTUNITIES in the ONTARIO MENTAL HEALTH SERVICE

A complete training program leading to eligibility for certification by examination in the specialty of psychiatry by the Royal College of Physicians and Surgeons (Canada) is offered while serving in the Ontario Hospital Service.

Applicants are required to have completed at least a one-year rotating internship in an approved hospital. They must be in possession of a license to practice medicine in the Province of Ontario.

The starting salary is \$4,500 per annum, plus a cost of living bonus of \$120 per annum, with annual increments for satisfactory service.

During the first four years a physician in the Ontario Hospital Service is under training. The first year is usually spent in one of the Ontario Hospitals. The second and third years are usually spent at the Toronto Psychiatric Hospital where a Diploma Course in Psychiatric Medicine is offered by the University of Toronto. Also, at the University of Western Ontario there is a similar training program of two years centering around the medical school. On successful completion of the University course and transfer back to an Ontario Hospital, physicians, on recommendation, are promoted to a minimum salary of \$6,500 per annum, plus the \$120 cost of living bonus.

The fourth year is usually spent at an Ontario Hospital approved for training specialists in the field of psychiatry. At the end of four years of the training program, physicians are expected to sit for examinations for the Specialist Certificate in Psychiatry from the Royal College of Physicians and Surgeons (Canada). After obtaining certification as a specialist, physicians, if recommended, automatically go to a minimum of \$7,500 per annum, plus the \$120 cost of living bonus. Increases beyond this figure are given by annual increments or promotion to higher positions.

Following certification as a specialist, a fairly wide variety of positions are available for physicians as senior staff psychiatrists on hospital duty, in charge of mental health clinics, or in charge of a community psychiatric clinic.

Further information may be obtained by writing to:—

The Director,
Mental Health Division, Ontario Department of Health,
Parliament Buildings, Toronto

ONTARIO DEPARTMENT OF HEALTH
Honourable Mackinnon Phillips, M.D., C.M., Minister.

ANTIBIOTICS

AND ANTIBIOTIC THERAPY

By Allen E. Hussar, M.D., F.A.C.P., Chief of Medical Service, Franklin Delano Roosevelt Veterans Administration Hospital, Montrose, New York; and Howard L. Holley, M.D., F.A.C.P., Associate Professor of Medicine, Medical College of Alabama, Birmingham.

475 pages. November, 1954. \$6.00

Here is a useful new work on the properties, potentialities, and limitations of all the antibiotics in clinical practice. Specific indications are given for antibiotic therapy applicable in various infections and infectious diseases.

A THERAPEUTIC INDEX

By C. M. Miller, M.D., M.R.C.P., Consultant Physician, Sefton General Hospital, Liverpool; and B. K. Ellenbogen, M.D., M.R.C.P., Senior Medical Registrar, Royal Southern Hospital, Liverpool.

148 pages. 1955. \$2.15

Just off the press, this British pocket-sized index provides a ready guide to the treatment of many of the conditions commonly met with in medical practice. There are useful appendices on diets, incubation and quarantine periods of infectious fevers, and dosage tables.

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